

THE

BIODIVERSITY CONNECTOR

Issue 1 - March 1995

*An Information Bulletin About The Natural Heritage Information Centre:
A Joint Project of Alberta Natural Resources Service and Parks Canada*

Background

Conservation of biological diversity (biodiversity) is the cornerstone of many national and provincial initiatives (e.g., Alberta Forest Conservation Strategy, Special Places 2000, ecosystem management) and land management decisions.

A major challenge to biodiversity conservation is ready access to information on species, natural communities and sites. Currently in Alberta, information is widely scattered in a variety of forms. Each source has its own classification system, so comparison of data can be difficult and time-consuming. Efficiently and quickly gathering such information is almost impossible, particularly for large areas.

THE FRAMEWORK

Alberta Parks Management Support Division and Parks Canada (Alberta Region) have combined forces on a biodiversity information project for the Rocky Mountain and Foothill natural regions of Alberta. We are accumulating known information on selected plant and animal species and plant communities including the following: confirmed locations; conservation status and management needs; managed areas, such as national and provincial parks, natural areas, wilderness areas, ecological

reserves; and sources of information. We are also collecting and standardizing data on significant plant communities. All of this information is housed in a series of linked computerized databases. The structure of these databases is modeled on the system used in the Conservation Data Centres (CDCs) of The Nature Conservancy.*

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We are focusing our efforts on those species of the greatest conservation concern in the Rocky Mountain and Foothill natural regions as well as the dry mixed boreal forest subregion around Elk Island National Park (see figure 1). This group includes approximately 340 species of vascular plants, 60 species of vertebrate animals, 300 species of mosses and several species of invertebrates. The location of each rare species and each community is being mapped on 1:50 000 topographic maps. Boundaries of managed areas are plotted on the same maps. The information is stored in dBase-compatible files so that it can be linked to a Geographic Information

* These CDCs form an international network encompassing most of the western hemisphere and parts of eastern Asia. We are working with neighbouring CDCs in British Columbia, Saskatchewan and Montana on species and communities of common interest.

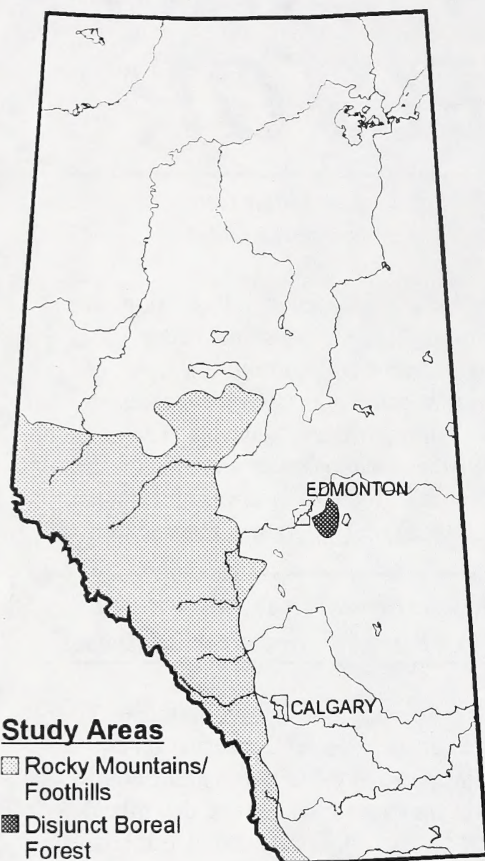


Figure 1: Natural Heritage Information Centre - Study Area

System (GIS). Information must be scrupulously checked and rechecked prior to being entered onto the system.

Initially data are being processed by and housed at Alberta Parks Management Support Division. We are looking into ways to link the system to both national and provincial parks field offices.

The CDC Model

The flow chart in figure 2 summarizes the conservation data centre model and its relationship to land management planning. The key features of the CDC model are the links between databases and the ability to track all species and communities. Our immediate focus is on "rare" communities and priority species (elements).

WHAT WE ARE DOING NOW

Currently, we are:

- Compiling lists of rare/uncommon vascular plant, moss, vertebrate animal and aquatic invertebrate species that occur in

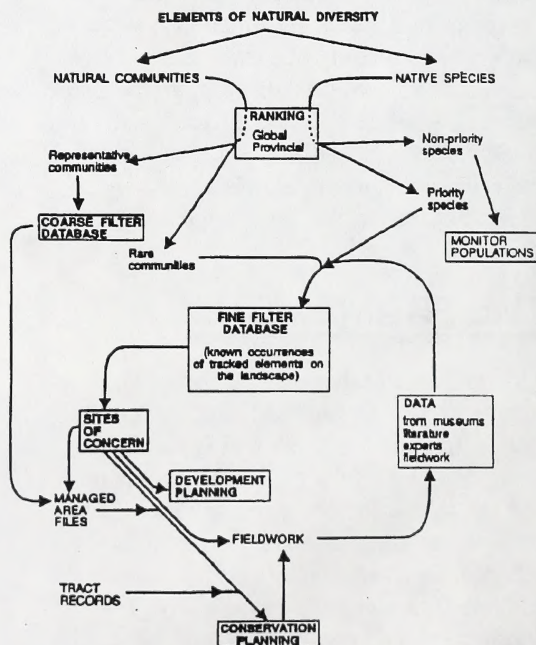


Figure 2: The CDC Model - From, Saskatchewan Conservation Data Centre Newsletter, Winter 1992.

the Rocky Mountain and Foothill natural regions.

- Compiling lists of rare/uncommon vascular plant, vertebrate and invertebrate animal species that occur in the disjunct boreal forest around Elk Island National Park.
- Mapping the occurrence of species.
- Ranking the degree of threat in the province for these species.
- Integrating the rare vascular plant database housed at Alberta Parks Management Support Division into the pilot system.
- Compiling vegetation information from the Banff/Jasper ecological land classification for entry into the system.
- Determining how selected plant communities (rare/uncommon) will be tracked by the system.
- Setting up computer files and linkages, manual files, map files, and reference documents.
- Entering information on species to be tracked onto computer.
- Mapping occurrences of species and managed areas.
- Compiling and processing sources of information on rare/uncommon species/communities.
- Funding several contractors to prepare and evaluate basic information on vascular plants, mosses, vertebrate and invertebrate animals (through Parks Canada).
- Planning development of the information system as a long-term ongoing process.
- Continually updating records already in the system and adding new ones.

OUR GOAL

To develop a comprehensive, efficient information management system that will benefit land use/management planning, including reserve selection and design, and the conservation of Alberta's biodiversity.

INFORMATION

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